



PATENTS
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Current Claims Schedule

- 1
- 2 1. (Currently Amended) A mass flowmeter for flowing media which works on the
- 3 Coriolis principle comprising,
 - 4 at least one straight measuring tube conveying the flowing medium,
 - 5 at least one oscillation generator acting on the measuring tube,
 - 6 at least one measurement value sensor detecting Coriolis forces and/or Coriolis
 - 7 oscillations based on Coriolis forces and outputting a measurement signal,
 - 8 a supporting tube accommodating the measuring tube, the oscillation generator
 - 9 and the at least one measurement value sensor,
 - 10 at least one first stress sensor for detecting the stress state of the measuring tube,
 - 11 wherein the first stress sensor comprises a length-change sensor,
 - 12 a correction device for correcting the measurement signal, the at least one measur-
 - 13 ing tube and the supporting tube being connected to one another at spaced-apart fixing
 - 14 points in a manner excluding relative axial movements and the axial spacing of said fix-
 - 15 ing points representing the oscillation length of the measuring tube, and the at least one
 - 16 measurement value sensor and the at least one first stress sensor being connected to the
 - 17 correction device, in order to feed to the correction device the measurement signal and
 - 18 the stress signal outputted by the at least one first stress sensor, and
 - 19 at least one second stress sensor detecting the stress state of the supporting tube,
 - 20 wherein the second stress sensor comprises a length-change sensor, said at least one sec-
 - 21 ond stress sensor being connected to the correction device in order to feed to the correc-
 - 22 tion device the stress signal outputted by the at least one second stress sensor, so that a
 - 23 measurement signal can be outputted from the correction device that is corrected on the
 - 24 basis of the stress signal outputted by the at least one first stress sensor and the stress sig-
 - 25 nal outputted by the at least one second stress sensor.

1 2. (Currently Amended) The mass flowmeter according to claim 1, wherein the ~~connection~~ correction device includes means for providing an empirically determined correction function for determining the corrected measurement signal.

1 3. (Currently Amended) The mass flowmeter according to claim 1 or 2, wherein said
2 at least one first and second stress sensors comprise ~~length-change sensors~~, in particular
3 wire strain gages.

1 4. (Original) The mass flowmeter according to any one of claims 1 to 3, wherein
2 said at least one first stress sensor is orientated in the longitudinal direction of the measuring
3 tube and/or the at least one second stress sensor is orientated in the longitudinal direction of the supporting tube.

1 5-7 (Cancelled)

1 8. (New) A mass flowmeter for flowing media, which works on the Coriolis principle
2 comprising,
3 at least one straight measuring tube conveying the flowing medium,
4 at least one oscillation generator acting on the measuring tube,
5 at least one measurement value sensor detecting Coriolis forces and/or Coriolis
6 oscillations based on Coriolis forces and outputting a measurement signal,
7 a supporting tube accommodating the measuring tube, the oscillation generator
8 and the at least one measurement value sensor,
9 at least one first stress sensor for detecting the stress state of the measuring tube,
10 the first stress sensor being a wire strain gauge which is oriented in the longitudinal direction
11 of the measuring tube,
12 a correction device for correcting the measurement signal, the at least one measuring
13 tube, and the supporting tube being connected to one another at spaced-apart fixing
14 points in a manner excluding relative axial movements and the axial spacing of said fix-

15 ing points representing the oscillation length of the measuring tube, and the at least one
16 measurement value sensor and the at least one first stress sensor being connected to the
17 corrective device, in order to feed the correction device the measurement signal and the
18 stress signal outputted by the at least one first stress sensor, and

19 at least one second stress sensor detecting the stress state of the supporting tube,
20 the second stress sensor being a wire strain gauge which is oriented in the longitudinal
21 direction of the supporting tube, said at least one second stress sensor being connected to
22 the correction device in order to feed to the correction device the stress signal outputted
23 by the at least one second stress sensor, so that a measurement signal can be outputted
24 from the correction device that is corrected on the basis of the stress signal outputted by
25 the at least one first stress sensor and the stress signal outputted by the at least one second
26 stress sensor.